Refine Search

Search Results -

Terms	Documents
6627427.pn.	1

Database:
US Pre-Grant Publication Full-Text Database
US Patents Full-Text Database
US OCR Full-Text Database
EPO Abstracts Database
JPO Abstracts Database
Derwent World Patents Index
IBM Technical Disclosure Bulletins

Search: L5

Refine Search

Recall Text | Clear | Interrupt

Search History

DATE: Friday, March 10, 2006 Printable Copy Create Case

Set Name side by side	Query	Hit Count	Set Name result set
DB=USPT; PLUR=YES; OP=OR			
L5	6627427.pn.	1	L5
DB=PGPB; PLUR=YES; OP=OR			
L4	L1 and (AT specific for ethylmalonyl)	1	L4
L3	L1 and (KSQ domain)	1	L3
L2	L1 and (loading module)	1	L2
L1	20030235892	1	L1

END OF SEARCH HISTORY

Hit List

Clear | Generate Collection | Print | Fwd Refs | Bkwd Refs | Generate OACS

First Hit

Search Results - Record(s) 1 through 10 of 91 returned.

☐ 1. Document ID: US 7008636 B2

L12: Entry 1 of 91 File: USPT Mar 7, 2006

US-PAT-NO: 7008636
DOCUMENT-IDENTIFIER: US 7008636 B2

TITLE: 2,3,5-substituted biphenyls useful in the treatment of insulin resistance and hyperglycemia

DATE-ISSUED: March 7, 2006

PRIOR-PUBLICATION:

DOC-ID	DATE
US 20040214869 A1	October 28, 2004

INVENTOR-INFORMATION:

NAME	CITY	STATE	ZIP CODE	COUNTRY
Butera; John A.	Clarksburg	NJ		US
Caufield; Craig E.	New York	NY		US
Graceffa; Russell F.	Hampton	NH		US
Greenfield; Alexander	Princeton Junction	NJ		US
Gundersen; Eric G.	Plainsboro	NJ		US
Havran; Lisa Marie	Bordentown	NJ		US
Katz; Alan H.	Lawrenceville	NJ		US
Lennox; Joseph R.	Morrisville	NC		US
Mayer; Scott C.	Robbinsville	NJ		US
McDevitt; Robert E.	Somerset	NJ		US

US-CL-CURRENT: 424/433; 514/354, 514/396, 514/415, 514/416, 514/469, 514/571; 546/339, 548/335.1, 548/469, 548/470, 549/471, 562/512, 562/587

Full | Title | Citation | Front | Review | Classification | Date | Reference | | | Claims | KWIC | Draw Desc | Ima

☐ 2. Document ID: US 7001735 B2

L12: Entry 2 of 91 File: USPT Feb 21, 2006

US-PAT-NO: 7001735
DOCUMENT-IDENTIFIER: US 7001735 B2

TITLE: Glucose transporter/sensor protein and uses thereof

DATE-ISSUED: February 21, 2006

PRIOR-PUBLICATION:

DOC-ID	DATE
US 20020038464 A1	March 28, 2002

INVENTOR-INFORMATION:

NAME	CITY	STATE	ZIP CODE	COUNTRY
Charron; Maureen J.	Flushing	NY		US
Katz; Ellen B.	Port Washington	NY		US

US-CL-CURRENT: 435/7.23; 435/6, 435/7.1, 436/64

Full | Title | Citation | Front | Review | Classification | Date | Reference | | | Claims | KWIC | Draw Desc | Image

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☐ 3. Document ID: US 6959048 B1

L12: Entry 3 of 91 File: USPT Oct 25, 2005

US-PAT-NO: 6959048
DOCUMENT-IDENTIFIER: US 6959048 B1

TITLE: Optimizing link quality by space and time interleaving

DATE-ISSUED: October 25, 2005

INVENTOR-INFORMATION:

NAME	CITY	STATE	ZIP CODE	COUNTRY
Horneman; Kari	Oulu			FI
Katz; Marcos	Oulu			FI
Ylitalo; Juha	Oulu			FI

US-CL-CURRENT: 375/299; 455/101, 455/103

Full | Title | Citation | Front | Review | Classification | Date | Reference | | | Claims | KWIC | Draw Desc | Image

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☐ 4. Document ID: US 6921650 B1

L12: Entry 4 of 91 File: USPT Jul 26, 2005

US-PAT-NO: 6921650
DOCUMENT-IDENTIFIER: US 6921650 B1

TITLE: Recombinant methods and materials for producing epothilone and epothilone derivatives

DATE-ISSUED: July 26, 2005

INVENTOR-INFORMATION:

NAME	CITY	STATE	ZIP CODE	COUNTRY
Julien; Bryan	Oakland	CA		
Katz; Leonard	Hayward	CA		
Khosla; Chaitan	Palo Alto	CA		
Tang; Li	Foster City	CA		
Ziermann; Rainer	San Mateo	CA		

US-CL-CURRENT: 435/76; 435/252.31, 435/252.33, 536/23.1, 536/23.2, 536/23.7

Full | Title | Citation | Front | Review | Classification | Date | Reference | | | Claims | KWIC | Draw Desc | Image

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☐ 5. Document ID: US 6894639 B1

L12: Entry 5 of 91 File: USPT May 17, 2005

US-PAT-NO: 6894639
DOCUMENT-IDENTIFIER: US 6894639 B1

TITLE: Generalized hebbian learning for principal component analysis and automatic target recognition, systems and method

DATE-ISSUED: May 17, 2005

INVENTOR-INFORMATION:

NAME	CITY	STATE	ZIP CODE	COUNTRY
Katz; Alan Jerry	Dallas	TX		

US-CL-CURRENT: 342/90; 342/159, 342/175, 342/195, 342/27, 342/89, 706/15

Full | Title | Citation | Front | Review | Classification | Date | Reference | Claims | KWIC | Draw Desc | Ima

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☐ 6. Document ID: US 6885024 B2

L12: Entry 6 of 91 File: USPT Apr 26, 2005

US-PAT-NO: 6885024
DOCUMENT-IDENTIFIER: US 6885024 B2

TITLE: Devices with organic crystallite active channels

DATE-ISSUED: April 26, 2005

INVENTOR-INFORMATION:

NAME	CITY	STATE	ZIP CODE	COUNTRY
Bao; Zhenan	Millburn	NJ		
Katz; Howard Edan	Summit	NJ		
Kloc; Christian	South Orange	NJ		

US-CL-CURRENT: 257/40; 438/99

Full | Title | Citation | Front | Review | Classification | Date | Reference | Claims | KWIC | Draw Desc | Ima

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☐ 7. Document ID: US 6870180 B2

L12: Entry 7 of 91 File: USPT Mar 22, 2005

US-PAT-NO: 6870180
DOCUMENT-IDENTIFIER: US 6870180 B2

TITLE: Organic polarizable gate transistor apparatus and method

DATE-ISSUED: March 22, 2005

INVENTOR-INFORMATION:

NAME	CITY	STATE	ZIP CODE	COUNTRY
Dodabalapur; Ananth	Millington	NJ		
Katz; Howard E.	Summit	NJ		
Sarpeshkar; Rahul	Arlington	MA		

US-CL-CURRENT: 257/40; 257/314, 257/405, 257/406, 257/410, 257/411, 257/E29.162, 257/E29.165, 257/E29.309, 257/E51.007

Full | Title | Citation | Front | Review | Classification | Date | Reference | Claims | KWIC | Draw Desc | Image

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☐ 8. Document ID: US 6858411 B1

L12: Entry 8 of 91 File: USPT Feb 22, 2005

US-PAT-NO: 6858411
DOCUMENT-IDENTIFIER: US 6858411 B1
**** See image for Certificate of Correction ****

TITLE: Recombinant methods and materials for producing epothilone and epothilone derivatives

DATE-ISSUED: February 22, 2005

INVENTOR-INFORMATION:

NAME	CITY	STATE	ZIP CODE	COUNTRY
Julien; Bryan	Oakland	CA		
Katz; Leonard	Hayward	CA		
Khosla; Chaitan	Palo Alto	CA		
Tang; Li	Foster City	CA		
Ziermann; Rainer	San Mateo	CA		

US-CL-CURRENT: 435/76; 435/183, 435/252.31, 435/252.33, 536/23.1, 536/23.2, 536/23.7

Full | Title | Citation | Front | Review | Classification | Date | Reference | Claims | KWIC | Draw Desc | Image

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☐ 9. Document ID: US 6834294 B1

L12: Entry 9 of 91 File: USPT Dec 21, 2004

US-PAT-NO: 6834294
DOCUMENT-IDENTIFIER: US 6834294 B1
**** See image for Certificate of Correction ****

TITLE: Methods and systems for providing and displaying information on a keyboard

DATE-ISSUED: December 21, 2004

INVENTOR-INFORMATION:

NAME	CITY	STATE	ZIP CODE	COUNTRY
Katz; Samuel F.	Givat Ze'ev			IL

US-CL-CURRENT: 709/203; 341/22, 341/23, 709/217, 709/219

Full | Title | Citation | Front | Review | Classification | Date | Reference | Claims | KWIC | Draw Desc | Image

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☐ 10. Document ID: US 6832724 B2

L12: Entry 10 of 91 File: USPT Dec 21, 2004

US-PAT-NO: 6832724
DOCUMENT-IDENTIFIER: US 6832724 B2

TITLE: Electro-optical assembly for image projection, especially in portable instruments

DATE-ISSUED: December 21, 2004

INVENTOR-INFORMATION:

NAME	CITY	STATE	ZIP CODE	COUNTRY
Yavid; Dmitriy	St. James	NY		
Wood; Frederick R.	Medford	NY		
Stern; Miklos	Flusing	NY		
Tan; Chinh	Setauket	NY		
Barkan; Edward	Miller Place	NY		
MacGregor; Shane	Forest Hills	NY		
Katz; Joseph	Stony Brook	NY		

US-CL-CURRENT: 235/454; 359/201

Terms	Documents
L11 and (AT or ACP or KSQ domain)	91

Hit List

Clear | Generate Collection | Print | Fwd Refs | Bkwd Refs | Generate OACS

First Hit

Search Results - Record(s) 11 through 20 of 91 returned.

☐ 11. Document ID: US 6807223 B2

L12: Entry 11 of 91 File: USPT Oct 19, 2004

US-PAT-NO: 6807223
DOCUMENT-IDENTIFIER: US 6807223 B2

TITLE: Method of performing code synchronization, and receiver

DATE-ISSUED: October 19, 2004

INVENTOR-INFORMATION:

NAME	CITY	STATE	ZIP CODE	COUNTRY
Katz; Marcos	Oulu			FI
Glisic; Savo	Oulu			FI
Iinatti; Jari	Oulu			FI

US-CL-CURRENT: 375/149

Full | Title | Citation | Front | Review | Classification | Date | Reference | Claims | KWIC | Draw Desc | Ima

☐ 12. Document ID: US 6777231 B1

L12: Entry 12 of 91 File: USPT Aug 17, 2004

US-PAT-NO: 6777231
DOCUMENT-IDENTIFIER: US 6777231 B1

TITLE: Adipose-derived stem cells and lattices

DATE-ISSUED: August 17, 2004

INVENTOR-INFORMATION:

NAME	CITY	STATE	ZIP CODE	COUNTRY
Katz; Adam J.	Charlottesville	VA		
Llull; Ramon	Mallorca			ES
Futrell; William J.	Pittsburgh	PA		
Hedrick; Marc H.	Encino	CA		
Benhaim; Prosper	Los Angeles	CA		
Lorenz; Hermann Peter	Los Angeles	CA		
Zhu; Min	Los Angeles	CA		

US-CL-CURRENT: 435/325; 435/366

Full | Title | Citation | Front | Review | Classification | Date | Reference | Claims | KWIC | Draw Desc | Ima

☐ 13. Document ID: US 6771989 B1

L12: Entry 13 of 91 File: USPT Aug 3, 2004

US-PAT-NO: 6771989
DOCUMENT-IDENTIFIER: US 6771989 B1

TITLE: Method of directional radio communication

DATE-ISSUED: August 3, 2004

INVENTOR-INFORMATION:

NAME	CITY	STATE	ZIP CODE	COUNTRY
Katz; Marcos	Oulu			FI
Ylitalo; Juha T	Oulu			FI

US-CL-CURRENT: 455/562.1; 455/561, 455/63.1, 455/63.4

Full | Title | Citation | Front | Review | Classification | Date | Reference | | | Claims | KWIC | Draw Desc | Ima

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☐ 14. Document ID: US 6767536 B1

L12: Entry 14 of 91 File: USPT Jul 27, 2004

US-PAT-NO: 6767536
DOCUMENT-IDENTIFIER: US 6767536 B1
**** See image for Certificate of Correction ****

TITLE: Recombinant Staphylococcus thioredoxin reductase and inhibitors thereof useful as antimicrobial agents

DATE-ISSUED: July 27, 2004

INVENTOR-INFORMATION:

NAME	CITY	STATE	ZIP CODE	COUNTRY
Aharonowitz; Yair	Hod Hasharon			IL
Borovok; Ilya	Ariel			IL
Cohen; Gerald	Raanana			IL
Uziel; Orit	Kfar-Saba			IL
Katz; Leonard	Oakland	CA		

US-CL-CURRENT: 424/93.42; 424/139.1, 424/165.1, 424/185.1, 424/237.1, 424/243.1, 424/94.1, 435/191, 435/252.3, 435/36, 435/471, 435/7.33, 435/7.7, 435/91.1, 435/91.5, 435/91.51

Full | Title | Citation | Front | Review | Classification | Date | Reference | | | Claims | KWIC | Draw Desc | Ima

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☐ 15. Document ID: US 6765021 B2

L12: Entry 15 of 91 File: USPT Jul 20, 2004

US-PAT-NO: 6765021
DOCUMENT-IDENTIFIER: US 6765021 B2

TITLE: 2,3,5-substituted biphenyls useful in the treatment of insulin resistance and hyperglycemia

DATE-ISSUED: July 20, 2004

INVENTOR-INFORMATION:

NAME	CITY	STATE	ZIP CODE	COUNTRY
Butera; John A.	Clarkburg	NJ		
Caufield; Craig E.	New York	NY		
Graceffa; Russell F.	Hampton	NH		
Greenfield; Alexander	Princeton Junction	NJ		
Gundersen; Eric G.	Plainsboro	NJ		
Havran; Lisa Marie	Bordentown	NJ		
Katz; Alan H.	Lawrenceville	NJ		
Lennox; Joseph R.	Morrisville	NC		
Mayer; Scott C.	Robbinsville	NJ		
McDevitt; Robert E.	Somerset	NJ		

US-CL-CURRENT: 514/596; 514/476, 514/485, 514/572, 560/19, 560/43, 562/457, 564/48

Full | Title | Citation | Front | Review | Classification | Date | Reference | | | Claims | KWIC | Draw Desc | Ima

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☐ 16. Document ID: US 6751597 B1

L12: Entry 16 of 91 File: USPT Jun 15, 2004

US-PAT-NO: 6751597
DOCUMENT-IDENTIFIER: US 6751597 B1

TITLE: System and method for adaptive trade specification and match-making optimization

DATE-ISSUED: June 15, 2004

INVENTOR-INFORMATION:

NAME	CITY	STATE	ZIP CODE	COUNTRY
Brodsky; Alex	Rockville	MD		
Zelivinski; Stanislav	Gaithersburg	MD		
Katz; Marcel	Rockville	MD		
Gozhansky; Alan	Rockville	MD		
Karpishpan; Sonya	Rockville	MD		

US-CL-CURRENT: 705/37; 705/35

Full | Title | Citation | Front | Review | Classification | Date | Reference | | | Claims | KWIC | Draw Desc | Ima

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☐ 17. Document ID: US 6697353 B2

L12: Entry 17 of 91 File: USPT Feb 24, 2004

US-PAT-NO: 6697353
DOCUMENT-IDENTIFIER: US 6697353 B2

TITLE: Voice-over-ATM switch architecture allowing congestion-dependent transport of silence cells

DATE-ISSUED: February 24, 2004

INVENTOR-INFORMATION:

NAME	CITY	STATE	ZIP CODE	COUNTRY
Bharucha; Behram H.	Millburn	NJ		

Farber; Norman	Freehold	NJ
Giuffrida; Thomas S.	Middletown	NJ
Kashper; Arik	Holmdel	NJ
Katz; Steven S.	Ocean	NJ

US-CL-CURRENT: 370/352

Full | Title | Citation | Front | Review | Classification | Date | Reference | | | Claims | KWIC | Draw Desc | Ima

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☐ 18. Document ID: US 6681132 B1

L12: Entry 18 of 91 File: USPT Jan 20, 2004

US-PAT-NO: 6681132
DOCUMENT-IDENTIFIER: US 6681132 B1

TITLE: Sodium magnetic reasonance imaging used in diagnosing tumors and assessing response to treatment

DATE-ISSUED: January 20, 2004

INVENTOR-INFORMATION:

NAME	CITY	STATE	ZIP CODE	COUNTRY
Katz; Jose	Closter	NJ		
Kline; Richard Paul	Riverdale	NY		
Wu; Edward X.	New York	NY		

US-CL-CURRENT: 600/410; 324/307, 424/9.2, 436/173, 436/63, 436/64

Full | Title | Citation | Front | Review | Classification | Date | Reference | | | Claims | KWIC | Draw Desc | Ima

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☐ 19. Document ID: US 6680937 B1

L12: Entry 19 of 91 File: USPT Jan 20, 2004

US-PAT-NO: 6680937
DOCUMENT-IDENTIFIER: US 6680937 B1

TITLE: Telecommunications network architecture for transporting fax, voice and data via an ATM switch including a STM to ATM terminal adapter

DATE-ISSUED: January 20, 2004

INVENTOR-INFORMATION:

NAME	CITY	STATE	ZIP CODE	COUNTRY
Bharucha; Behram H.	Millburn	NJ		
Farber; Norman	Freehold	NJ		
Giuffrida; Thomas S.	Middletown	NJ		
Kashper; Arik	Holmdel	NJ		
Katz; Steven S.	Ocean	NJ		

US-CL-CURRENT: 370/353; 370/230, 370/395.61, 370/466

Full | Title | Citation | Front | Review | Classification | Date | Reference | | | Claims | KWIC | Draw Desc | Ima

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☐ 20. Document ID: US 6671499 B1

L12: Entry 20 of 91 File: USPT Dec 30, 2003

US-PAT-NO: 6671499
DOCUMENT-IDENTIFIER: US 6671499 B1

TITLE: Method for directing antenna beam, and transceiver in a mobile communication system

DATE-ISSUED: December 30, 2003

INVENTOR-INFORMATION:

NAME	CITY	STATE	ZIP CODE	COUNTRY
Ylitalo; Juha	Oulu			FI
Katz; Marcos	Oulu			FI

US-CL-CURRENT: 455/101; 375/299, 455/133, 455/506, 455/562.1

Terms	Documents
L11 and (AT or ACP or KSQ domain)	91

Refine Search

Search Results -

Terms	Documents
L11 and (AT or ACP or KSQ domain)	91

Database:
US Pre-Grant Publication Full-Text Database
US Patents Full-Text Database
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Search: L12

Refine Search | Recall Text | Clear | Interrupt

Search History

DATE: Friday, March 10, 2006 Printable Copy Create Case

Set Name side by side	Query	Hit Count	Set Name result set
DB=USPT; PLUR=YES; OP=OR			
L12	L11 and (AT or ACP or KSQ domain)	91	L12
L11	L7 and (KSQ domain)	91	L11
L10	L8 and (KSQ domain)	1	L10
L9	L8 and l7	1	L9
L8	revill.in.	28	L8
L7	Katz.in.	2271	L7
L6	L1 and (trixton or tween)	0	L6
L5	6627427.pn.	1	L5
DB=PGPB; PLUR=YES; OP=OR			
L4	L1 and (AT specific for ethylmalonyl)	1	L4
L3	L1 and (KSQ domain)	1	L3
L2	L1 and (loading module)	1	L2
L1	20030235892	1	L1

END OF SEARCH HISTORY

Refine Search

Search Results -

Terms	Documents
6033883.pn.	1

Database:
US Pre-Grant Publication Full-Text Database
US Patents Full-Text Database
US OCR Full-Text Database
EPO Abstracts Database
JPO Abstracts Database
Derwent World Patents Index
IBM Technical Disclosure Bulletins

Search: L6

Refine Search

Recall Text | Clear | Interrupt

Search History

DATE: Friday, March 10, 2006 Printable Copy Create Case

Set Name side by side	Query	Hit Count	Set Name result set
DB=USPT; PLUR=YES; OP=OR			
L6	6033883.pn.	1	L6
L5	6066721.pn.	1	L5
L4	5962290.pn.	1	L4
L3	6303342.pn.	1	L3
L2	5672491.pn.	1	L2
L1	6627427.pn.	1	L1

END OF SEARCH HISTORY

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 NEWS  5  DEC 14  2006 MeSH terms loaded for MEDLINE file segment of TOXCENTER
 NEWS  6  DEC 14  CA/CAplus to be enhanced with updated IPC codes
 NEWS  7  DEC 21  IPC search and display fields enhanced in CA/CAplus with the
                  IPC reform
 NEWS  8  DEC 23  New IPC8 SEARCH, DISPLAY, and SELECT fields in USPATFULL/
                  USPAT2
 NEWS  9  JAN 13  IPC 8 searching in IFIPAT, IFIUDB, and IFICDB
 NEWS 10  JAN 13  New IPC 8 SEARCH, DISPLAY, and SELECT enhancements added to
                  INPADOC
 NEWS 11  JAN 17  Pre-1988 INPI data added to MARPAT
 NEWS 12  JAN 17  IPC 8 in the WPI family of databases including WPIFV
 NEWS 13  JAN 30  Saved answer limit increased
 NEWS 14  JAN 31  Monthly current-awareness alert (SDI) frequency
                  added to TULSA
 NEWS 15  FEB 21  STN AnaVist, Version 1.1, lets you share your STN AnaVist
                  visualization results
 NEWS 16  FEB 22  Status of current WO (PCT) information on STN
 NEWS 17  FEB 22  The IPC thesaurus added to additional patent databases on STN
 NEWS 18  FEB 22  Updates in EPFULL; IPC 8 enhancements added
 NEWS 19  FEB 27  New STN AnaVist pricing effective March 1, 2006
 NEWS 20  FEB 28  MEDLINE/LMEDLINE reload improves functionality
 NEWS 21  FEB 28  TOXCENTER reloaded with enhancements
 NEWS 22  FEB 28  REGISTRY/ZREGISTRY enhanced with more experimental spectral
                  property data
 NEWS 23  MAR 01  INSPEC reloaded and enhanced
 NEWS 24  MAR 03  Updates in PATDPA; addition of IPC 8 data without attributes
 NEWS 25  MAR 08  X.25 communication option no longer available after June 2006

 NEWS EXPRESS  FEBRUARY 15 CURRENT VERSION FOR WINDOWS IS V8.01a,
               CURRENT MACINTOSH VERSION IS V6.0c(ENG) AND V6.0Jc(JP),
               AND CURRENT DISCOVER FILE IS DATED 19 DECEMBER 2005.
               V8.0 AND V8.01 USERS CAN OBTAIN THE UPGRADE TO V8.01a AT
               http://download.cas.org/express/v8.0-Discover/

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FILE 'HOME' ENTERED AT 15:53:58 ON 10 MAR 2006

=> file medline, uspatful, dgene, embase, wpids, fsta, jicst, biosis, biotechds, scisearch
COST IN U.S. DOLLARS SINCE FILE ENTRY TOTAL SESSION
FULL ESTIMATED COST 0.21 0.21

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=> s polyketide synthase gene
L1 1362 POLYKETIDE SYNTHASE GENE

=> s l1 and (encoding loading module)
L2 0 L1 AND (ENCODING LOADING MODULE)

=> s l1 and (encoding starter module)
L3 0 L1 AND (ENCODING STARTER MODULE)

=> s l1 and module
L4 237 L1 AND MODULE

=> s l4 and (AT and KSQ and ACP domains)
L5 0 L4 AND (AT AND KSQ AND ACP DOMAINS)

=> s l4 and (KSQ domain)
L6 13 L4 AND (KSQ DOMAIN)

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=> s l4 and (AT specific for ethylmalonyl coA)
L7            6 L4 AND (AT SPECIFIC FOR ETHYLMALONYL COA)

=>

=> s l4 and (ACP domain)
L8           75 L4 AND (ACP DOMAIN)

=> s l8 and l7 and l6
L9            1 L8 AND L7 AND L6

=> d l9 ti abs ibib tot

L9    ANSWER 1 OF 1  BIOTECHDS COPYRIGHT 2006 THE THOMSON CORP. on STN
TI    Novel recombinant host cell (Saccharopolyspora erythraea) comprising
      recombinant biosynthetic pathways for producing precursor (butyryl CoA)
      required for biosynthesis of a product (propyl-6-deoxyerythronolide B);
         recombinant bacterium useful for antibiotic production
AN    2002-11559  BIOTECHDS
AB    DERWENT ABSTRACT:
      NOVELTY - A recombinant host cell (I) having one or more expression
      vectors expressing enzymes (II) capable of making product (P) and
      precursor (PR) required for biosynthesis of (P) in (I), where (I): (a) is
      unable to make (P) due to lack of all/part of a biosynthetic pathway
      required to produce PR; or (b) makes (P) in much smaller amounts due to
      PR being present in low amounts in the absence of (II), is new.
           DETAILED DESCRIPTION - INDEPENDENT CLAIMS are also included for the
      following: (1) a recombinant polyketide synthase
      gene (III) that encodes a loading module comprising a
      ketosynthase (KS)Q domain, an acyl transferase (AT) specific
      for ethylmalonyl CoA, and an acyl carrier protein (
      ACP) domain; and (2) a host cell (IV) that comprises
      (III), and a recombinant gene such as recombinant ccr or icm genes.
           WIDER DISCLOSURE - The following are disclosed: (1) a hybrid
      polyketide synthase (PKS) in which the loading module is
      composed of KSQ domain, an ethylmalonyl CoA specific
      AT domain, and an ACP domain, and AT domain specific
      for malonyl CoA; (2) recombinant DNA expression vectors and methods for
      making a polyketide and its required precursors in any host cell; (3)
      methods and genetic constructs for producing a glycosylated and/or
      hydroxylated polyketide compounds directly in the host cell of interest;
      (4) modified polyketide products of PKS which are further modified by
      hydroxylation and glycosylation reaction to exhibit antibiotic activity;
      and (5) novel ketolide compounds, polyketide compounds with potent
      antibiotic activity of significant interest due to activity against
      antibiotic resistant strain of bacteria.
           BIOTECHNOLOGY - Preferred Host Cell: PR is preferably a primary
      metabolite that is produced in a first cell but not in a second
      heterologous cell. (I) comprises one or more expression vectors that
      drive expression of enzymes capable of making a product (polyketide,
      preferably propyl-6-deoxyerythronolide B (6-dEB) synthesized by modular
      polyketide synthase (PKS)) and a precursor (butyryl CoA) required for the
      biosynthesis of the product in the cell. Optionally, (I) is a eryM mutant
      producing a polyketide. Additionally, (I) comprises: (a) recombinant ccr,
      acsA, bdh, and ech genes; (b) recombinant icm, vdh, ccr, acsA, vdh, and
      ech genes; or (c) recombinant icm, ccr, acsA, bdh, and ech genes.
      Preferably propyl-6-dEB is produced by a modular PKS in a host cell
      comprising mutation in eryM gene, involving a precursor biosynthetic
      enzyme such as propionyl CoA decarboxylase that converts propionyl CoA to
      methyl melanoyl CoA. The cell is preferably further modified to
      overexpress a biotin transferase enzyme encoded by the birA gene. (I) is
      optionally a Streptomyces fradiae cell expressing one or more genes
      encoding an erythromycin biosynthetic enzyme, and is producing
```

15-methylerythromycin.

ACTIVITY - Antimicrobial.

MECHANISM OF ACTION - Antibiotic. No suitable data given.

USE - (I) (Saccharopolyspora erythraea cell which does not express a functional eryM gene product) is useful for producing 14,15-propenylerythromycin and/or the corresponding 14,15-propenyl-6-deoxyerythronolide B. The method involves culturing (I) that expresses isobutyryl CoA mutase, valine dehydrogenase, butyryl CoA dehydrogenase, and 6-deoxyerythronolide polyketide synthase. The butyryl CoA dehydrogenase is expressed from gene isolated from Clostridum acetobutylicum or Mycobacterium tuberculosis (fadE25) (claimed). (I) is useful for producing polyketides (both macrolide aglycones and their modified derivatives) that are naturally occurring or produced by recombinant DNA technology. The polyketides produced are useful intermediates in formation of compounds with antibiotic or other activity through hydroxylation, epoxidation, and glycosylation reactions. The polyketides are useful as antibiotics and as intermediates in synthesis of other useful compounds such as erythromycin. The erythromycin analogs produced using (I) are used clinically as prokinetic agents to induce phase III of migrating motor complexes, to increase esophageal peristalsis, etc.

ADMINISTRATION - The polyketide compounds are administered orally, topically, parenterally or by inhalation spray. Dosages of the compound range from 0.01-50 (preferably 0.1-10) mg/kg body weight/day.

EXAMPLE - Construction of eryM knockout strains and production of 15-methyl-erythromycin was carried out follows. The construction of two recombinant DNA vectors designed to disrupt the eryM gene in Saccharopolyspora erythraea by single crossover was performed by the following method. These vectors can be used to generate a strain of S.erythraea that produces higher titers of 15-methyl erythromycin A or C than does wild-type S.erythraea under the same conditions without the need for the addition of an exogenous diketide. The desired strain differed from the wild-type strain in that intracellular pools of propanoyl-CoA were greatly reduced, pools of butanoyl-CoA were greatly elevated, and pools of methylmalonyl-CoA remain high. Disruption of the eryM gene, which encoded methylmalonyl decarboxylase, caused loss of erythromycin production that can be restored by feeding propionate, methylpropionate, or propanol in a wild-type strain of S.erythraea. The S.erythraea eryM gene was isolated by PCR or the coding region. An internal fragment of the eryM gene was isolated by polymerase chain reaction (PCR) and cloned into the XbaI and HindIII sites of the vectors pWHM3 (a Streptomyces vector) (conferred thiostrepton resistance) and pOJ260 (a Streptomyces vector) (conferred apramycin resistance) or gene disruption. The resulting vectors were propagated in Escherichia coli ET12567 to obtain unmethylated DNA. The above constructs were then introduced into a high-producing S.erythraea strain for gene disruption by homologous recombination. Protoplast transformation of this strain was very difficult, transformants were only obtained only using alkali-denatured, non-methylated DNA of only the pOJ260-derived construct. The transformant stains were grown for DNA isolation and in a standard two-stage shake flask fermentation procedure to evaluate production. Metabolites were quantitated by ion counting in a mass spectrometer relative to a roxithromycin internal standard. Putative eryM knockout transformants were shown to be correct by Southern blot hybridization. The mutant displayed the same morphology as the parent strain, both in liquid medium and on agar plates. The parent strain and two isolates of the eryM- mutant were grown using the shake flask procedure. In addition to the oil plus propanol feed, culture flasks were fed equivalent levels of oil alone, oil plus butanol, oil plus propionate, and oil plus butyrate. The cultures were killed by the propionate and butyrate feeds, and these flasks were discarded. Samples were taken from other flasks each day and the set was analyzed by ion counting. Production of erythromycin A and B by the eryM- mutant was

similar to that of the corresponding wild-type strain when fed oil alone or oil and propanol in rich medium. For both strains, production of erythromycin A and B was depressed with an oil and butanol feed. While knockout of eryM did not reduce production of erythromycin A and B in rich medium in the dramatic way. The high-producing wild-type strain appeared to produce low levels of 15-methyl-erythromycins when butanol was fed instead of propanol. The eryM- mutant produced a higher maximum percentage 15-methyl-erythromycin A and B with an oil and butanol feed compared to the wild-type strain, demonstrating that propionyl CoA levels were reduced in the eryM- strain.(85 pages)

ACCESSION NUMBER: 2002-11559 BIOTECHDS
TITLE: Novel recombinant host cell (Saccharopolyspora erythraea) comprising recombinant biosynthetic pathways for producing precursor (butyryl CoA) required for biosynthesis of a product (propyl-6-deoxyerythronolide B); recombinant bacterium useful for antibiotic production
AUTHOR: KATZ L; REVILL P
PATENT ASSIGNEE: KOSAN BIOSCIENCES INC
PATENT INFO: WO 2001031049 3 May 2001
APPLICATION INFO: WO 1999-US29447 25 Oct 1999
PRIORITY INFO: US 1999-161414 25 Oct 1999
DOCUMENT TYPE: Patent
LANGUAGE: English
OTHER SOURCE: WPI: 2002-256023 [30]

=> d his

(FILE 'HOME' ENTERED AT 15:53:58 ON 10 MAR 2006)

FILE 'MEDLINE, USPATFULL, DGENE, EMBASE, WPIDS, FSTA, JICST-EPLUS, BIOSIS, BIOTECHDS, SCISEARCH' ENTERED AT 15:54:39 ON 10 MAR 2006

```
L1          1362 S POLYKETIDE SYNTHASE GENE
L2             0 S L1 AND (ENCODING LOADING MODULE)
L3             0 S L1 AND (ENCODING STARTER MODULE)
L4           237 S L1 AND MODULE
L5             0 S L4 AND (AT AND KSQ AND ACP DOMAINS)
L6            13 S L4 AND (KSQ DOMAIN)
L7             6 S L4 AND (AT SPECIFIC FOR ETHYLMALONYL COA)
L8            75 S L4 AND (ACP DOMAIN)
L9             1 S L8 AND L7 AND L6
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=> e katz, l/au
E1             3     KATZ ZEILIG M/AU
E2            14     KATZ ZVI/AU
E3             0 --> KATZ, L/AU
E4             1     KATZAGIANNAKIS J/AU
E5             1     KATZAKIAN/AU
E6             7     KATZAKIAN A/AU
E7             1     KATZAKIAN A J/AU
E8             2     KATZAKIAN ARTHUR/AU
E9             1     KATZAKIAN JOHN/AU
E10           17     KATZAKIAN JR ARTHUR/AU
E11            1     KATZAKIAN TERRY A/AU
E12            3     KATZAMAN R E/AU
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=>  e revill, p/au
E1            25     REVILL W PETER/AU
E2             2     REVILL WP/AU
E3             0 --> REVILL, P/AU
E4            33     REVILLA A/AU
E5             1     REVILLA A D/AU
E6             1     REVILLA A G/AU
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E7            1     REVILLA A G JR/AU
E8           21     REVILLA A L/AU
E9           10     REVILLA A P/AU
E10           1     REVILLA A P DE/AU
E11           1     REVILLA A V JR/AU
E12           2     REVILLA A Z/AU

=> d his

     (FILE 'HOME' ENTERED AT 15:53:58 ON 10 MAR 2006)

     FILE 'MEDLINE, USPATFULL, DGENE, EMBASE, WPIDS, FSTA, JICST-EPLUS,
     BIOSIS, BIOTECHDS, SCISEARCH' ENTERED AT 15:54:39 ON 10 MAR 2006
L1         1362 S POLYKETIDE SYNTHASE GENE
L2            0 S L1 AND (ENCODING LOADING MODULE)
L3            0 S L1 AND (ENCODING STARTER MODULE)
L4          237 S L1 AND MODULE
L5            0 S L4 AND (AT AND KSQ AND ACP DOMAINS)
L6           13 S L4 AND (KSQ DOMAIN)
L7            6 S L4 AND (AT SPECIFIC FOR ETHYLMALONYL COA)
L8           75 S L4 AND (ACP DOMAIN)
L9            1 S L8 AND L7 AND L6
                E KATZ, L/AU
                E REVILL, P/AU

=> d l7 ti abs ibib tot

L7   ANSWER 1 OF 6  USPATFULL on STN
TI     Production of polyketides
AB     Recombinant host cells that comprise recombinant DNA expression vectors
       that drive expression of a product and a precursor for biosynthesis of
       that product can be used to produce useful products such as polyketides
       in host cells that do not naturally produce the product or produce the
       product at low levels due to the absence of the precursor or the
       presence of the precursor in rate limiting amounts.

CAS INDEXING IS AVAILABLE FOR THIS PATENT.
ACCESSION NUMBER:        2003:335016  USPATFULL
TITLE:                   Production of polyketides
INVENTOR(S):             Katz, Leonard, Oakland, CA, UNITED STATES
                         Revill, Peter, Oakland, CA, UNITED STATES

                              NUMBER       KIND    DATE
                         ---------------- ------ --------
PATENT INFORMATION:      US 2003235892      A1   20031225
APPLICATION INFO.:       US 2003-607809     A1   20030627  (10)
RELATED APPLN. INFO.:    Division of Ser. No. US 2000-697022, filed on 25 Oct
                         2000, GRANTED, Pat. No. US 6627427

                                NUMBER        DATE
                         ------------------ --------
PRIORITY INFORMATION:    US 1999-161414P    19991025 (60)
DOCUMENT TYPE:           Utility
FILE SEGMENT:            APPLICATION
LEGAL REPRESENTATIVE:    MORRISON & FOERSTER LLP, 3811 VALLEY CENTRE DRIVE,
                         SUITE 500, SAN DIEGO, CA, 92130-2332
NUMBER OF CLAIMS:        6
EXEMPLARY CLAIM:         1
NUMBER OF DRAWINGS:      2 Drawing Page(s)
LINE COUNT:              2751
CAS INDEXING IS AVAILABLE FOR THIS PATENT.

L7   ANSWER 2 OF 6  USPATFULL on STN
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TI Polynucleotides encoding the fkbA gene of the FK-520 **polyketide synthase gene** cluster

AB Host cells comprising recombinant vectors encoding the FK-520 polyketide synthase and FK-520 modification enzymes can be used to produce the FK-520 polyketide. Recombinant DNA constructs comprising one or more FK-520 polyketide synthase domains, modules, open reading frames, and variants thereof can be used to produce recombinant polyketide synthases and a variety of different polyketides with application as pharmaceutical and veterinary products.

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

ACCESSION NUMBER: 2003:251115 USPATFULL

TITLE: Polynucleotides encoding the fkbA gene of the FK-520 **polyketide synthase gene** cluster

INVENTOR(S): Reeves, Christopher, Orinda, CA, UNITED STATES
Chu, Daniel, Santa Clara, CA, UNITED STATES
Khosla, Chaitan, Palo Alto, CA, UNITED STATES
Santi, Daniel, San Francisco, CA, UNITED STATES
Wu, Kai, Foster City, CA, UNITED STATES

	NUMBER	KIND	DATE
PATENT INFORMATION:	US 2003175901	A1	20030918
	US 6759536	B2	20040706
APPLICATION INFO.:	US 2001-940316	A1	20010827 (9)

RELATED APPLN. INFO.: Division of Ser. No. US 1999-410551, filed on 1 Oct 1999, GRANTED, Pat. No. US 6503737

	NUMBER	DATE
PRIORITY INFORMATION:	US 1998-102748P	19981002 (60)
	US 1999-123810P	19990311 (60)
	US 1999-139650P	19990617 (60)

DOCUMENT TYPE: Utility
FILE SEGMENT: APPLICATION
LEGAL REPRESENTATIVE: MORRISON & FOERSTER LLP, 3811 VALLEY CENTRE DRIVE, SUITE 500, SAN DIEGO, CA, 92130-2332
NUMBER OF CLAIMS: 20
EXEMPLARY CLAIM: 1
NUMBER OF DRAWINGS: 9 Drawing Page(s)
LINE COUNT: 13940
CAS INDEXING IS AVAILABLE FOR THIS PATENT.

L7 ANSWER 3 OF 6 USPATFULL on STN

TI Isolated nucleic acids relating to the fkbA gene within the FK-520 **polyketide synthase gene** cluster

AB Host cells comprising recombinant vectors encoding the FK-520 polyketide synthase and FK-520 modification enzymes can be used to produce the FK-520 polyketide. Recombinant DNA constructs comprising one or more FK-520 polyketide synthase domains, modules, open reading frames, and variants thereof can be used to produce recombinant polyketide synthases and a variety of different polyketides with application as pharmaceutical and veterinary products.

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

ACCESSION NUMBER: 2003:6812 USPATFULL

TITLE: Isolated nucleic acids relating to the fkbA gene within the FK-520 **polyketide synthase gene** cluster

INVENTOR(S): Reeves, Christopher, Orinda, CA, United States
Chu, Daniel, Santa Clara, CA, United States
Khosla, Chaitan, Palo Alto, CA, United States

Santi, Daniel, San Francisco, CA, United States
Wu, Kai, Foster City, CA, United States
PATENT ASSIGNEE(S): Kosan Biosciences, Inc., Hayward, CA, United States (U.S. corporation)

	NUMBER	KIND	DATE
PATENT INFORMATION:	US 6503737	B1	20030107
APPLICATION INFO.:	US 1999-410551		19991001 (9)

	NUMBER	DATE
PRIORITY INFORMATION:	US 1998-102748P	19981002 (60)
	US 1999-139650P	19990617 (60)
	US 1999-123810P	19990311 (60)

DOCUMENT TYPE: Utility
FILE SEGMENT: GRANTED
PRIMARY EXAMINER: Achutamurthy, Ponnathapura
ASSISTANT EXAMINER: Kerr, Kathleen M
LEGAL REPRESENTATIVE: Wllach, Brenda J., Ring, Christine, Kaster, Kevin
NUMBER OF CLAIMS: 34
EXEMPLARY CLAIM: 1
NUMBER OF DRAWINGS: 8 Drawing Figure(s); 9 Drawing Page(s)
LINE COUNT: 13428
CAS INDEXING IS AVAILABLE FOR THIS PATENT.

L7 ANSWER 4 OF 6 USPATFULL on STN
TI Polyketide synthase enzymes and recombinant DNA constructs therefor
AB Host cells comprising recombinant vectors encoding the FK-520 polyketide synthase and FK-520 modification enzymes can be used to produce the FK-520 polyketide. Recombinant DNA constructs comprising one or more FK-520 polyketide synthase domains, modules, open reading frames, and variants thereof can be used to produce recombinant polyketide synthases and a variety of different polyketides with application as pharmaceutical and veterinary products.

CAS INDEXING IS AVAILABLE FOR THIS PATENT.
ACCESSION NUMBER: 2002:17448 USPATFULL
TITLE: Polyketide synthase enzymes and recombinant DNA constructs therefor
INVENTOR(S): Reeves, Christopher, Orinda, CA, UNITED STATES
Chu, Daniel, Santa Clara, CA, UNITED STATES
Khosla, Chaitan, Palo Alto, CA, UNITED STATES
Santi, Daniel, San Francisco, CA, UNITED STATES
Wu, Kai, Foster City, CA, UNITED STATES

	NUMBER	KIND	DATE
PATENT INFORMATION:	US 2002010328	A1	20020124
	US 6660862	B2	20031209
APPLICATION INFO.:	US 2001-825621	A1	20010403 (9)

RELATED APPLN. INFO.: Division of Ser. No. US 1999-410551, filed on 1 Oct 1999, PENDING

	NUMBER	DATE
PRIORITY INFORMATION:	WO 1999-US22886	19991001
	US 1998-102748P	19981002 (60)
	US 1999-123810P	19990311 (60)
	US 1999-139650P	19990617 (60)

DOCUMENT TYPE: Utility
FILE SEGMENT: APPLICATION
LEGAL REPRESENTATIVE: Carolyn A. Favorito, Morrison & Foerster LLP, Suite

500, 3811 Valley Centre Drive, San Diego, CA, 92130-2332
NUMBER OF CLAIMS: 20
EXEMPLARY CLAIM: 1
NUMBER OF DRAWINGS: 9 Drawing Page(s)
LINE COUNT: 4752
CAS INDEXING IS AVAILABLE FOR THIS PATENT.

L7 ANSWER 5 OF 6 WPIDS COPYRIGHT 2006 THE THOMSON CORP on STN
TI Novel recombinant host cell (Saccharopolyspora erythraea) comprising recombinant biosynthetic pathways for producing precursor (butyryl CoA) required for biosynthesis of a product (propyl-6-deoxyerythronolide B).
AN 2002-256023 [30] WPIDS
CR 2001-308652 [32]
AB WO 200131049 A UPAB: 20040202
NOVELTY - A recombinant host cell (I) having one or more expression vectors expressing enzymes (II) capable of making product (P) and precursor (PR) required for biosynthesis of (P) in (I), where (I):
(a) is unable to make (P) due to lack of all/part of a biosynthetic pathway required to produce PR; or
(b) makes (P) in much smaller amounts due to PR being present in low amounts in the absence of (II), is new.
DETAILED DESCRIPTION - INDEPENDENT CLAIMS are also included for the following:
(1) a recombinant **polyketide synthase gene** (III) that encodes a loading **module** comprising a ketosynthase (KS)Q domain, an acyl transferase (AT) **specific** for **ethylmalonyl CoA**, and an acyl carrier protein (ACP) domain; and
(2) a host cell (IV) that comprises (III), and a recombinant gene such as recombinant ccr or icm genes.
ACTIVITY - Antimicrobial.
MECHANISM OF ACTION - Antibiotic.
No suitable data given.
USE - (I) (Saccharopolyspora erythraea cell which does not express a functional eryM gene product) is useful for producing 14,15-propenylerythromycin and/or the corresponding 14,15-propenyl-6-deoxyerythronolide B. The method involves culturing (I) that expresses isobutyryl CoA mutase, valine dehydrogenase, butyryl CoA dehydrogenase, and 6-deoxyerythronolide polyketide synthase. The butyryl CoA dehydrogenase is expressed from gene isolated from Clostridum acetobutylicum or Mycobacterium tuberculosis (fadE25) (claimed).
(I) is useful for producing polyketides (both macrolide aglycones and their modified derivatives) that are naturally occurring or produced by recombinant DNA technology. The polyketides produced are useful intermediates in formation of compounds with antibiotic or other activity through hydroxylation, epoxidation, and glycosylation reactions. The polyketides are useful as antibiotics and as intermediates in synthesis of other useful compounds such as erythromycin. The erythromycin analogs produced using (I) are used clinically as prokinetic agents to induce phase III of migrating motor complexes, to increase esophageal peristalsis, etc.
Dwg.0/2
ACCESSION NUMBER: 2002-256023 [30] WPIDS
CROSS REFERENCE: 2001-308652 [32]
DOC. NO. CPI: C2002-076316
TITLE: Novel recombinant host cell (Saccharopolyspora erythraea) comprising recombinant biosynthetic pathways for producing precursor (butyryl CoA) required for biosynthesis of a product (propyl-6-deoxyerythronolide B).
DERWENT CLASS: B03 B04 B05 C06 D16
INVENTOR(S): KATZ, L; REVILL, P; DAYEM, L; KEALEY, J; SANTI, D

PATENT ASSIGNEE(S): (KOSA-N) KOSAN BIOSCIENCES INC; (DAYE-I) DAYEM L; (KEAL-I) KEALEY J; (SANT-I) SANTI D; (KATZ-I) KATZ L; (REVI-I) REVILL P

COUNTRY COUNT: 95

PATENT INFORMATION:

PATENT NO	KIND	DATE	WEEK	LA	PG
WO 2001031049	A2	20010503	(200230)*	EN	85
RW: AT BE CH CY DE DK EA ES FI FR GB GH GM GR IE IT KE LS LU MC MW MZ NL OA PT SD SE SL SZ TZ UG ZW					
W: AE AG AL AM AT AU AZ BA BB BG BR BY BZ CA CH CN CR CU CZ DE DK DM DZ EE ES FI GB GD GE GH GM HR HU ID IL IN IS JP KE KG KP KR KZ LC LK LR LS LT LU LV MA MD MG MK MN MW MX MZ NO NZ PL PT RO RU SD SE SG SI SK SL TJ TM TR TT TZ UA UG UZ VN YU ZA ZW					
AU 2001012317	A	20010508	(200230)		
EP 1224317	A2	20020724	(200256)	EN	
R: AL AT BE CH CY DE DK ES FI FR GB GR IE IT LI LT LU LV MC MK NL PT RO SE SI					
US 2002142401	A1	20021003	(200267)		
US 6627427	B1	20030930	(200367)		
US 2003235892	A1	20031225	(200408)		

APPLICATION DETAILS:

PATENT NO	KIND		APPLICATION	DATE
WO 2001031049	A2		WO 2000-US29447	20001025
AU 2001012317	A		AU 2001-12317	20001025
EP 1224317	A2		EP 2000-973861	20001025
			WO 2000-US29447	20001025
US 2002142401	A1	Provisional	US 1999-161414P	19991025
		Provisional	US 1999-161703P	19991027
		Provisional	US 2000-206082P	20000518
		Div ex	US 2000-699136	20001027
			US 2001-942407	20010829
US 6627427	B1	Provisional	US 1999-161414P	19991025
			US 2000-697022	20001025
US 2003235892	A1	Provisional	US 1999-161414P	19991025
		Div ex	US 2000-697022	20001025
			US 2003-607809	20030627

FILING DETAILS:

PATENT NO	KIND		PATENT NO
AU 2001012317	A	Based on	WO 2001031049
EP 1224317	A2	Based on	WO 2001031049
US 2003235892	A1	Div ex	US 6627427

PRIORITY APPLN. INFO: US 1999-161414P 19991025; US 1999-161703P 19991027; US 2000-206082P 20000518; US 2000-699136 20001027; US 2001-942407 20010829; US 2000-697022 20001025; US 2003-607809 20030627

L7 ANSWER 6 OF 6 BIOTECHDS COPYRIGHT 2006 THE THOMSON CORP. on STN.

TI Novel recombinant host cell (Saccharopolyspora erythraea) comprising recombinant biosynthetic pathways for producing precursor (butyryl CoA) required for biosynthesis of a product (propyl-6-deoxyerythronolide B); recombinant bacterium useful for antibiotic production

AN 2002-11559 BIOTECHDS

AB DERWENT ABSTRACT:

NOVELTY - A recombinant host cell (I) having one or more expression vectors expressing enzymes (II) capable of making product (P) and precursor (PR) required for biosynthesis of (P) in (I), where (I): (a) is unable to make (P) due to lack of all/part of a biosynthetic pathway required to produce PR; or (b) makes (P) in much smaller amounts due to PR being present in low amounts in the absence of (II), is new.

DETAILED DESCRIPTION - INDEPENDENT CLAIMS are also included for the following: (1) a recombinant **polyketide synthase gene** (III) that encodes a loading **module** comprising a ketosynthase (KS)Q domain, an acyl transferase (AT) **specific** for **ethylmalonyl CoA**, and an acyl carrier protein (ACP) domain; and (2) a host cell (IV) that comprises (III), and a recombinant gene such as recombinant ccr or icm genes.

WIDER DISCLOSURE - The following are disclosed: (1) a hybrid polyketide synthase (PKS) in which the loading **module** is composed of KSQ domain, an ethylmalonyl CoA specific AT domain, and an ACP domain, and AT domain specific for malonyl CoA; (2) recombinant DNA expression vectors and methods for making a polyketide and its required precursors in any host cell; (3) methods and genetic constructs for producing a glycosylated and/or hydroxylated polyketide compounds directly in the host cell of interest; (4) modified polyketide products of PKS which are further modified by hydroxylation and glycosylation reaction to exhibit antibiotic activity; and (5) novel ketolide compounds, polyketide compounds with potent antibiotic activity of significant interest due to activity against antibiotic resistant strain of bacteria.

BIOTECHNOLOGY - Preferred Host Cell: PR is preferably a primary metabolite that is produced in a first cell but not in a second heterologous cell. (I) comprises one or more expression vectors that drive expression of enzymes capable of making a product (polyketide, preferably propyl-6-deoxyerythronolide B (6-dEB) synthesized by modular polyketide synthase (PKS)) and a precursor (butyryl CoA) required for the biosynthesis of the product in the cell. Optionally, (I) is a eryM mutant producing a polyketide. Additionally, (I) comprises: (a) recombinant ccr, acsA, bdh, and ech genes; (b) recombinant icm, vdh, ccr, acsA, vdh, and ech genes; or (c) recombinant icm, ccr, acsA, bdh, and ech genes. Preferably propyl-6-dEB is produced by a modular PKS in a host cell comprising mutation in eryM gene, involving a precursor biosynthetic enzyme such as propionyl CoA decarboxylase that converts propionyl CoA to methyl melanoyl CoA. The cell is preferably further modified to overexpress a biotin transferase enzyme encoded by the birA gene. (I) is optionally a Streptomyces fradiae cell expressing one or more genes encoding an erythromycin biosynthetic enzyme, and is producing 15-methylerythromycin.

ACTIVITY - Antimicrobial.

MECHANISM OF ACTION - Antibiotic. No suitable data given.

USE - (I) (Saccharopolyspora erythraea cell which does not express a functional eryM gene product) is useful for producing 14,15-propenylerythromycin and/or the corresponding 14,15-propenyl-6-deoxyerythronolide B. The method involves culturing (I) that expresses isobutyryl CoA mutase, valine dehydrogenase, butyryl CoA dehydrogenase, and 6-deoxyerythronolide polyketide synthase. The butyryl CoA dehydrogenase is expressed from gene isolated from Clostridum acetobutylicum or Mycobacterium tuberculosis (fadE25) (claimed). (I) is useful for producing polyketides (both macrolide aglycones and their modified derivatives) that are naturally occurring or produced by recombinant DNA technology. The polyketides produced are useful intermediates in formation of compounds with antibiotic or other activity through hydroxylation, epoxidation, and glycosylation reactions. The polyketides are useful as antibiotics and as intermediates in synthesis of other useful compounds such as erythromycin. The erythromycin analogs

produced using (I) are used clinically as prokinetic agents to induce phase III of migrating motor complexes, to increase esophageal peristalsis, etc.

ADMINISTRATION - The polyketide compounds are administered orally, topically, parenterally or by inhalation spray. Dosages of the compound range from 0.01-50 (preferably 0.1-10) mg/kg body weight/day.

EXAMPLE - Construction of eryM knockout strains and production of 15-methyl-erythromycin was carried out follows. The construction of two recombinant DNA vectors designed to disrupt the eryM gene in Saccharopolyspora erythraea by single crossover was performed by the following method. These vectors can be used to generate a strain of S.erythraea that produces higher titers of 15-methyl erythromycin A or C than does wild-type S.erythraea under the same conditions without the need for the addition of an exogenous diketide. The desired strain differed from the wild-type strain in that intracellular pools of propanoyl-CoA were greatly reduced, pools of butanoyl-CoA were greatly elevated, and pools of methylmalonyl-CoA remain high. Disruption of the eryM gene, which encoded methylmalonyl decarboxylase, caused loss of erythromycin production that can be restored by feeding propionate, methylpropionate, or propanol in a wild-type strain of S.erythraea. The S.erythraea eryM gene was isolated by PCR or the coding region. An internal fragment of the eryM gene was isolated by polymerase chain reaction (PCR) and cloned into the XbaI and HindIII sites of the vectors pWHM3 (a Streptomyces vector) (conferred thiostrepton resistance) and pOJ260 (a Streptomyces vector) (conferred apramycin resistance) or gene disruption. The resulting vectors were propagated in Escherichia coli ET12567 to obtain unmethylated DNA. The above constructs were then introduced into a high-producing S.erythraea strain for gene disruption by homologous recombination. Protoplast transformation of this strain was very difficult, transformants were only obtained only using alkali-denatured, non-methylated DNA of only the pOJ260-derived construct. The transformant stains were grown for DNA isolation and in a standard two-stage shake flask fermentation procedure to evaluate production. Metabolites were quantitated by ion counting in a mass spectrometer relative to a roxithromycin internal standard. Putative eryM knockout transformants were shown to be correct by Southern blot hybridization. The mutant displayed the same morphology as the parent strain, both in liquid medium and on agar plates. The parent strain and two isolates of the eryM- mutant were grown using the shake flask procedure. In addition to the oil plus propanol feed, culture flasks were fed equivalent levels of oil alone, oil plus butanol, oil plus propionate, and oil plus butyrate. The cultures were killed by the propionate and butyrate feeds, and these flasks were discarded. Samples were taken from other flasks each day and the set was analyzed by ion counting. Production of erythromycin A and B by the eryM- mutant was similar to that of the corresponding wild-type strain when fed oil alone or oil and propanol in rich medium. For both strains, production of erythromycin A and B was depressed with an oil and butanol feed. While knockout of eryM did not reduce production of erythromycin A and B in rich medium in the dramatic way. The high-producing wild-type strain appeared to produce low levels of 15-methyl-erythromycins when butanol was fed instead of propanol. The eryM- mutant produced a higher maximum percentage 15-methyl-erythromycin A and B with an oil and butanol feed compared to the wild-type strain, demonstrating that propionyl CoA levels were reduced in the eryM- strain.(85 pages)

ACCESSION NUMBER: 2002-11559 BIOTECHDS

TITLE: Novel recombinant host cell (Saccharopolyspora erythraea) comprising recombinant biosynthetic pathways for producing precursor (butyryl CoA) required for biosynthesis of a product (propyl-6-deoxyerythronolide B);
recombinant bacterium useful for antibiotic production

AUTHOR: KATZ L; REVILL P

PATENT ASSIGNEE: KOSAN BIOSCIENCES INC

PATENT INFO: WO 2001031049 3 May 2001
APPLICATION INFO: WO 1999-US29447 25 Oct 1999
PRIORITY INFO: US 1999-161414 25 Oct 1999
DOCUMENT TYPE: Patent
LANGUAGE: English
OTHER SOURCE: WPI: 2002-256023 [30]

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(FILE 'HOME' ENTERED AT 15:53:58 ON 10 MAR 2006)

FILE 'MEDLINE, USPATFULL, DGENE, EMBASE, WPIDS, FSTA, JICST-EPLUS; BIOSIS, BIOTECHDS, SCISEARCH' ENTERED AT 15:54:39 ON 10 MAR 2006

L1 1362 S POLYKETIDE SYNTHASE GENE
L2 0 S L1 AND (ENCODING LOADING MODULE)
L3 0 S L1 AND (ENCODING STARTER MODULE)
L4 237 S L1 AND MODULE
L5 0 S L4 AND (AT AND KSQ AND ACP DOMAINS)
L6 13 S L4 AND (KSQ DOMAIN)
L7 6 S L4 AND (AT SPECIFIC FOR ETHYLMALONYL COA)
L8 75 S L4 AND (ACP DOMAIN)
L9 1 S L8 AND L7 AND L6
E KATZ, L/AU
E REVILL, P/AU

=> s l6 and l8
L10 7 L6 AND L8

=> d l10 ti abs ibib tot

L10 ANSWER 1 OF 7 USPATFULL on STN
TI Recombinant narbonolide polyketide synthase
AB Recombinant DNA compounds that encode all or a portion of the narbonolide polyketide synthase are used to express recombinant polyketide synthase genes in host cells for the production of narbonolide, narbonolide derivatives, and polyketides that are useful as antibiotics and as intermediates in the synthesis of compounds with pharmaceutical value.

CAS INDEXING IS AVAILABLE FOR THIS PATENT.
ACCESSION NUMBER: 2005:30813 USPATFULL
TITLE: Recombinant narbonolide polyketide synthase
INVENTOR(S): Ashley, Gary, Alameda, CA, UNITED STATES
Betlach, Melanie C., San Francisco, CA, UNITED STATES
Betlach, Mary, San Francisco, CA, UNITED STATES
McDaniel, Robert, Palo Alto, CA, UNITED STATES
Tang, Li, Foster City, CA, UNITED STATES

	NUMBER	KIND	DATE	
PATENT INFORMATION:	US 2005026244	A1	20050203	
APPLICATION INFO.:	US 2004-468828	A1	20040415	(10)
	WO 2002-US5642		20020222	

RELATED APPLN. INFO.: Continuation of Ser. No. US 2001-793708, filed on 22 Feb 2001, PENDING Continuation-in-part of Ser. No. US 2000-657440, filed on 7 Sep 2000, GRANTED, Pat. No. US 6509455 Division of Ser. No. US 1999-320878, filed on 27 May 1999, GRANTED, Pat. No. US 6117659 Continuation-in-part of Ser. No. US 1998-141908, filed on 28 Aug 1998, GRANTED, Pat. No. US 6503741 Continuation-in-part of Ser. No. US 1998-73538, filed on 6 May 1998, GRANTED, Pat. No. US 6558942

Continuation-in-part of Ser. No. US 1997-846247, filed on 30 Apr 1997, GRANTED, Pat. No. US 6391594
DOCUMENT TYPE: Utility
FILE SEGMENT: APPLICATION
LEGAL REPRESENTATIVE: MORRISON & FOERSTER LLP, 755 PAGE MILL RD, PALO ALTO, CA, 94304-1018
NUMBER OF CLAIMS: 20
EXEMPLARY CLAIM: 1
NUMBER OF DRAWINGS: 6 Drawing Page(s)
LINE COUNT: 7804
CAS INDEXING IS AVAILABLE FOR THIS PATENT.

L10 ANSWER 2 OF 7 USPATFULL on STN
TI Polyketides and their synthesis
AB The complete sequence of the gene cluster for the monensin type I polyketide synthase, from S. cinnamonensis, is provided. Thus variant polyketides containing monensin-derived elements can be genetically engineered. Furthermore there are novel features, e.g. a regulatory protein mon RI, which are of wide utility.

CAS INDEXING IS AVAILABLE FOR THIS PATENT.
ACCESSION NUMBER: 2004:280345 USPATFULL
TITLE: Polyketides and their synthesis
INVENTOR(S): Leadley, Peter Francis, Cambridge, UNITED KINGDOM
Staunton, James, Cambridge, UNITED KINGDOM
Oliynyk, Mark Yan, Cambridge, UNITED KINGDOM

	NUMBER	KIND	DATE	
PATENT INFORMATION:	US 2004219645	A1	20041104	
APPLICATION INFO.:	US 2002-980217	A1	20020506	(9)
	WO 2001-GB2072		20010530	

	NUMBER	DATE
PRIORITY INFORMATION:	GB 1999-12563	19990528

DOCUMENT TYPE: Utility
FILE SEGMENT: APPLICATION
LEGAL REPRESENTATIVE: DANN, DORFMAN, HERRELL & SKILLMAN, saet, 1601 MARKET STREET, PHILADELPHIA, PA, 19103-2307
NUMBER OF CLAIMS: 45
EXEMPLARY CLAIM: 1
NUMBER OF DRAWINGS: 4 Drawing Page(s)
LINE COUNT: 8550
CAS INDEXING IS AVAILABLE FOR THIS PATENT.

L10 ANSWER 3 OF 7 USPATFULL on STN
TI Hybrid glycosylated products and their production and use
AB The present invention relates to hybrid glycosylated products, and in particular, to natural products such as polyketides and glycopeptides, and to processes for their preparation. The invention is particularly concerned with recombinant cells in which a cloned microbial glycosyltransferase can be conveniently screened for its ability to generate specific glycosylated derivatives when supplied with polyketide, peptide, or polyketide-peptides as substrates. The invention demonstrates that cloned glycosyltransferases when rapidly screened for their ability to attach a range of activated sugars to a range of exogenously supplied or endogenously generated aglycone templates, show a surprising flexibility towards both aglycone and sugar substrates, and that this process allows the production of glycosylated polyketides in good yield. This overcomes the problem not only of supplying novel sugar attachments to individual polyketides, including polyketides altered by genetic engineering, but also of increasing the diversity of polyketide

libraries by combinatorial attachment of sugars.

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

ACCESSION NUMBER:	2003:288667 USPATFULL			
TITLE:	Hybrid glycosylated products and their production and use			
INVENTOR(S):	Leadlay, Peter Francis, Gaupe Rd Cambridge, UNITED KINGDOM Staunton, James, Cambridge, UNITED KINGDOM Gaisser, Sabine, Cambridge, UNITED KINGDOM			

	NUMBER	KIND	DATE	
PATENT INFORMATION:	US 2003203425	A1	20031030	
APPLICATION INFO.:	US 2003-257549	A1	20030325	(10)
	WO 2001-GB1743		20010417	

	NUMBER	DATE
PRIORITY INFORMATION:	GB 2000-9207	20000413

DOCUMENT TYPE:	Utility
FILE SEGMENT:	APPLICATION
LEGAL REPRESENTATIVE:	DANN, DORFMAN, HERRELL & SKILLMAN, 1601 MARKET STREET, SUITE 2400, PHILADELPHIA, PA, 19103-2307
NUMBER OF CLAIMS:	57
EXEMPLARY CLAIM:	1
NUMBER OF DRAWINGS:	40 Drawing Page(s)
LINE COUNT:	2503

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

L10 ANSWER 4 OF 7 USPATFULL on STN

TI Heterologous production of 15-methyl-6-deoxyerthronolide B

AB Recombinant host cells that comprise recombinant DNA expression vectors that drive expression of a product and a precursor for biosynthesis of that product can be used to produce useful products such as polyketides in host cells that do not naturally produce the product or produce the product at low levels due to the absence of the precursor or the presence of the precursor in rate limiting amounts.

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

ACCESSION NUMBER:	2003:260669 USPATFULL			
TITLE:	Heterologous production of 15-methyl-6-deoxyerthronolide B			
INVENTOR(S):	Katz, Leonard, Oakland, CA, United States Revill, Peter, Oakland, CA, United States			
PATENT ASSIGNEE(S):	Kosan Biosciences, Inc., Hayward, CA, United States (U.S. corporation)			

	NUMBER	KIND	DATE	
PATENT INFORMATION:	US 6627427	B1	20030930	
APPLICATION INFO.:	US 2000-697022		20001025	(9)

	NUMBER	DATE
PRIORITY INFORMATION:	US 1999-161414P	19991025 (60)

DOCUMENT TYPE:	Utility
FILE SEGMENT:	GRANTED
PRIMARY EXAMINER:	Achutamurthy, Ponnathapu
ASSISTANT EXAMINER:	Kerr, Kathleen
LEGAL REPRESENTATIVE:	Morrison & Foerster LLP, Kaster, Kevin
NUMBER OF CLAIMS:	12
EXEMPLARY CLAIM:	1

NUMBER OF DRAWINGS: 20 Drawing Figure(s); 20 Drawing Page(s)
LINE COUNT: 3167
CAS INDEXING IS AVAILABLE FOR THIS PATENT.

L10 ANSWER 5 OF 7 USPATFULL on STN
TI Recombinant narbonolide polyketide synthase
AB Recombinant DNA compounds that encode all or a portion of the narbonolide polyketide synthase are used to express recombinant polyketide synthase genes in host cells for the production of narbonolide, narbonolide derivatives, and polyketides that are useful as antibiotics and as intermediates in the synthesis of compounds with pharmaceutical value.

CAS INDEXING IS AVAILABLE FOR THIS PATENT.
ACCESSION NUMBER: 2003:152931 USPATFULL
TITLE: Recombinant narbonolide polyketide synthase
INVENTOR(S): Ashley, Gary, Alameda, CA, UNITED STATES
Betlach, Melanie C., San Francisco, CA, UNITED STATES
Betlach, Mary, San Francisco, CA, UNITED STATES
McDaniel, Robert, Palo Alto, CA, UNITED STATES
Tang, Li, Foster City, CA, UNITED STATES

	NUMBER	KIND	DATE
PATENT INFORMATION:	US 2003104597	A1	20030605
	US 6902913	B2	20050607
APPLICATION INFO.:	US 2001-793708	A1	20010222 (9)

RELATED APPLN. INFO.: Continuation-in-part of Ser. No. US 2000-657440, filed on 7 Sep 2000, PENDING Division of Ser. No. US 1999-320878, filed on 27 May 1999, PATENTED Continuation-in-part of Ser. No. US 1998-141908, filed on 28 Aug 1998, PENDING Continuation-in-part of Ser. No. US 1998-73538, filed on 6 May 1998, PENDING Continuation-in-part of Ser. No. US 1997-846247, filed on 30 Apr 1997, PENDING

	NUMBER	DATE
PRIORITY INFORMATION:	US 1999-134990P	19990520 (60)
	US 1999-119139P	19990208 (60)
	US 1998-100880P	19980922 (60)
	US 1998-87080P	19980528 (60)

DOCUMENT TYPE: Utility
FILE SEGMENT: APPLICATION
LEGAL REPRESENTATIVE: Carolyn A. Favorito, Morrison & Foerster LLP, Suite 500, 3811 Valley Center Drive, San Diego, CA, 92130
NUMBER OF CLAIMS: 20
EXEMPLARY CLAIM: 1
NUMBER OF DRAWINGS: 6 Drawing Page(s)
LINE COUNT: 4563
CAS INDEXING IS AVAILABLE FOR THIS PATENT.

L10 ANSWER 6 OF 7 USPATFULL on STN
TI DNA encoding methymycin and pikromycin
AB A biosynthetic gene cluster for methymycin and pikromycin as well as a biosynthetic gene cluster for desosamine is provided.

CAS INDEXING IS AVAILABLE FOR THIS PATENT.
ACCESSION NUMBER: 2003:106911 USPATFULL
TITLE: DNA encoding methymycin and pikromycin
INVENTOR(S): Sherman, David H., St. Louis Park, MN, UNITED STATES
Liu, Hung-Wen, Austin, TX, UNITED STATES
Xue, Yongquan, St. Paul, MN, UNITED STATES

Zhao, Lishan, Carlsbad, CA, UNITED STATES

	NUMBER	KIND	DATE
PATENT INFORMATION:	US 2003073824	A1	20030417
APPLICATION INFO.:	US 2001-988384	A1	20011119 (9)

RELATED APPLN. INFO.: Continuation of Ser. No. WO 1999-US14398, filed on 25 Jun 1999, UNKNOWN
DOCUMENT TYPE: Utility
FILE SEGMENT: APPLICATION
LEGAL REPRESENTATIVE: SCHWEGMAN, LUNDBERG, WOESSNER & KLUTH, P.A., P.O. BOX 2938, MINNEAPOLIS, MN, 55402
NUMBER OF CLAIMS: 60
EXEMPLARY CLAIM: 1
NUMBER OF DRAWINGS: 164 Drawing Page(s)
LINE COUNT: 10898
CAS INDEXING IS AVAILABLE FOR THIS PATENT.

L10 ANSWER 7 OF 7 BIOTECHDS COPYRIGHT 2006 THE THOMSON CORP. on STN
TI Novel recombinant host cell (Saccharopolyspora erythraea) comprising recombinant biosynthetic pathways for producing precursor (butyryl CoA) required for biosynthesis of a product (propyl-6-deoxyerythronolide B); recombinant bacterium useful for antibiotic production
AN 2002-11559 BIOTECHDS
AB DERWENT ABSTRACT:

NOVELTY - A recombinant host cell (I) having one or more expression vectors expressing enzymes (II) capable of making product (P) and precursor (PR) required for biosynthesis of (P) in (I), where (I): (a) is unable to make (P) due to lack of all/part of a biosynthetic pathway required to produce PR; or (b) makes (P) in much smaller amounts due to PR being present in low amounts in the absence of (II), is new.

DETAILED DESCRIPTION - INDEPENDENT CLAIMS are also included for the following: (1) a recombinant **polyketide synthase gene** (III) that encodes a loading **module** comprising a ketosynthase (KS)Q domain, an acyl transferase (AT) specific for ethylmalonyl CoA, and an acyl carrier protein (**ACP**) **domain**; and (2) a host cell (IV) that comprises (III), and a recombinant gene such as recombinant ccr or icm genes.

WIDER DISCLOSURE - The following are disclosed: (1) a hybrid polyketide synthase (PKS) in which the loading **module** is composed of **KSQ domain**, an ethylmalonyl CoA specific AT domain, and an **ACP domain**, and AT domain specific for malonyl CoA; (2) recombinant DNA expression vectors and methods for making a polyketide and its required precursors in any host cell; (3) methods and genetic constructs for producing a glycosylated and/or hydroxylated polyketide compounds directly in the host cell of interest; (4) modified polyketide products of PKS which are further modified by hydroxylation and glycosylation reaction to exhibit antibiotic activity; and (5) novel ketolide compounds, polyketide compounds with potent antibiotic activity of significant interest due to activity against antibiotic resistant strain of bacteria.

BIOTECHNOLOGY - Preferred Host Cell: PR is preferably a primary metabolite that is produced in a first cell but not in a second heterologous cell. (I) comprises one or more expression vectors that drive expression of enzymes capable of making a product (polyketide, preferably propyl-6-deoxyerythronolide B (6-dEB) synthesized by modular polyketide synthase (PKS)) and a precursor (butyryl CoA) required for the biosynthesis of the product in the cell. Optionally, (I) is a eryM mutant producing a polyketide. Additionally, (I) comprises: (a) recombinant ccr, acsA, bdh, and ech genes; (b) recombinant icm, vdh, ccr, acsA, vdh, and ech genes; or (c) recombinant icm, ccr, acsA, bdh, and ech genes. Preferably propyl-6-dEB is produced by a modular PKS in a host cell comprising mutation in eryM gene, involving a precursor biosynthetic

enzyme such as propionyl CoA decarboxylase that converts propionyl CoA to methyl melanoyl CoA. The cell is preferably further modified to overexpress a biotin transferase enzyme encoded by the birA gene. (I) is optionally a Streptomyces fradiae cell expressing one or more genes encoding an erythromycin biosynthetic enzyme, and is producing 15-methylerythromycin.

ACTIVITY - Antimicrobial.

MECHANISM OF ACTION - Antibiotic. No suitable data given.

USE - (I) (Saccharopolyspora erythraea cell which does not express a functional eryM gene product) is useful for producing 14,15-propenylerythromycin and/or the corresponding 14,15-propenyl-6-deoxyerythronolide B. The method involves culturing (I) that expresses isobutyryl CoA mutase, valine dehydrogenase, butyryl CoA dehydrogenase, and 6-deoxyerythronolide polyketide synthase. The butyryl CoA dehydrogenase is expressed from gene isolated from Clostridum acetobutylicum or Mycobacterium tuberculosis (fadE25) (claimed). (I) is useful for producing polyketides (both macrolide aglycones and their modified derivatives) that are naturally occurring or produced by recombinant DNA technology. The polyketides produced are useful intermediates in formation of compounds with antibiotic or other activity through hydroxylation, epoxidation, and glycosylation reactions. The polyketides are useful as antibiotics and as intermediates in synthesis of other useful compounds such as erythromycin. The erythromycin analogs produced using (I) are used clinically as prokinetic agents to induce phase III of migrating motor complexes, to increase esophageal peristalsis, etc.

ADMINISTRATION - The polyketide compounds are administered orally, topically, parenterally or by inhalation spray. Dosages of the compound range from 0.01-50 (preferably 0.1-10) mg/kg body weight/day.

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fed equivalent levels of oil alone, oil plus butanol, oil plus propionate, and oil plus butyrate. The cultures were killed by the propionate and butyrate feeds, and these flasks were discarded. Samples were taken from other flasks each day and the set was analyzed by ion counting. Production of erythromycin A and B by the eryM- mutant was similar to that of the corresponding wild-type strain when fed oil alone or oil and propanol in rich medium. For both strains, production of erythromycin A and B was depressed with an oil and butanol feed. While knockout of eryM did not reduce production of erythromycin A and B in rich medium in the dramatic way. The high-producing wild-type strain appeared to produce low levels of 15-methyl-erythromycins when butanol was fed instead of propanol. The eryM- mutant produced a higher maximum percentage 15-methyl-erythromycin A and B with an oil and butanol feed compared to the wild-type strain, demonstrating that propionyl CoA levels were reduced in the eryM- strain. (85 pages)

ACCESSION NUMBER: 2002-11559 BIOTECHDS
TITLE: Novel recombinant host cell (Saccharopolyspora erythraea) comprising recombinant biosynthetic pathways for producing precursor (butyryl CoA) required for biosynthesis of a product (propyl-6-deoxyerythronolide B); recombinant bacterium useful for antibiotic production
AUTHOR: KATZ L; REVILL P
PATENT ASSIGNEE: KOSAN BIOSCIENCES INC
PATENT INFO: WO 2001031049 3 May 2001
APPLICATION INFO: WO 1999-US29447 25 Oct 1999
PRIORITY INFO: US 1999-161414 25 Oct 1999
DOCUMENT TYPE: Patent
LANGUAGE: English
OTHER SOURCE: WPI: 2002-256023 [30]